

What is claimed is:

1. A method for identifying the primary cell under Site Selective Diversity Transmit comprises the steps of:

- (1) a temporary identifier is assigned by the system to each cell;
- (2) the identifier indicating the primary cell is transmitted periodically by the mobile station to the connected cells via the up link feedback indication fields;
- (3) the identifier indicating the primary cell transmitted by the mobile station is received by the base station, if the signals received by the base station satisfy with one of the following conditions, then the said base station will consider itself as a primary cell; the identification conditions are:

- A. the identifier code word indicating the primary cell received by the base station is matched with the identifier code word of itself;

- B. the quality of the up link signals received by the base station does not satisfy with a quality threshold, the said threshold is a parameter defined by the network;

- C. the bits of dropping of the identifier code word caused by using the up link compression mode excess a value, the said value is a maximum integer not larger than $1/3$ length of the original identifier code word;

wherein, the said condition B in step (3) shall also comprises: the identifier code word indicating the primary cell received by the base station has a certain matching degree with the ID code word of the cell itself.

2. A method for identifying the primary cell under Site Selective Diversity Transmit according to Claim 1, wherein, the said matching degree in condition B of step (3) refers to that the matching degree P of the identifier code word indicating the primary cell received by the base station and ID code of the present cell is larger than a certain threshold Plr.

3. A method for identifying the primary cell under the Site Selective Diversity Transmit according to Claim 2, wherein, the said threshold Plr in condition B of step (3) is set by the high layer.